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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,858	12/29/2000	Susan R. Santos	30644	8518

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EXAMINER	
MEINECKE DIAZ, SUSANNA M	
ART UNIT	PAPER NUMBER
3692	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/751,858	SANTOS ET AL.	
	Examiner	Art Unit	
	Susanna M. Diaz	3692	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2007 and 13 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed August 13, 2007, responsive to the BPAI decision rendered June 13, 2007 (which entered new grounds of rejection in the record), has been entered.

Claims 1, 4, 7, 10, 12, 15, 17, and 19 have been amended.

Claims 1-21 and 27 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1, 2, 4-21 and 27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

A claimed process is eligible for patent protection under 35 U.S.C. § 101 if:

> "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. See Benson, 409 U.S. at 70 ('Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines.'); Diehr, 450 U.S. at 192 (holding that use of mathematical formula in process 'transforming or reducing an article to a different state or thing' constitutes patent-eligible subject matter); see also Flook, 437 U.S. at 589 n.9 ('An argument can be made [that the Supreme] Court has only recognized a process as within the statutory definition when it either was tied to a particular apparatus or operated to change materials to a 'different state or thing' '); Cochrane v. Deener, 94 U.S. 780, 788 (1876) ('A process is...an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.').[7] A claimed process involving a fundamental

> principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article." (*In re Bilski, 88 USPQ2d 1385, 1391 (Fed. Cir. 2008))*

Also noted in *Bilski* is the statement, "Process claim that recites fundamental principle, and that otherwise fails 'machine-or-transformation' test for whether such claim is drawn to patentable subject matter under 35 U.S.C. §101, is not rendered patent eligible by mere field-of-use limitations; another corollary to machine-or-transformation test is that recitation of specific machine or particular transformation of specific article does not transform unpatentable principle into patentable process if recited machine or transformation constitutes mere 'insignificant post-solution activity.'" (*In re Bilski, 88 USPQ2d 1385, 1385 (Fed. Cir. 2008))* Claims 12-21 and 27 are not tied to a particular machine or apparatus nor do they transform a particular article into a different state or thing; therefore, claims 12-21 and 27 are non-statutory under § 101. Also, displaying the data/output, at best, qualifies as mere insignificant post-solution activity. It is also noted that the mere recitation of a machine in the preamble with an absence of a machine in the body of a claim fails to make the claim statutory under 35 U.S.C. § 101, as seen in the Board of Patent Appeals Informative Opinion *Ex parte Langemyr et al.* (Appeal 2008-1495),

http://www.uspto.gov/web/offices/dcom/bpai/its/fd081495.pdf .

In the Board decision rendered June 13, 2007, the Board stated, "Claim 1 and 7 require the ability to make workload adjustments and claims 12 and 17 require the actual steps, contrasted with just the ability, of making workload adjustments. The ability to make any adjustments satisfies the requirements for claims 1 and 7, because in these claims workload adjustment is a field of use limitation, and were one to desire to make adjustments concerning workload, the capacity would exist as required in the claims. As to actually making such adjustments in claims 12 and 17, this begs the question of what a workload adjustment is…Absent a lexicographic definition, claim terms are given their broadest reasonable interpretation to a person of ordinary skill, which would be an adjustment bearing some relation to something that is characterized by the load related to some form of work related to the data under analysis." (Page 16 of the Board decision) In the instance of claims 1, 2, and 4-11, workload adjustment is a field of use; therefore, the recited statistical analysis of events can be applied to each and every substantial practical application, thereby preempting all substantial practical applications of the statistical analysis (which is improper under 35 U.S.C. § 101). Regarding claims 12-21, while the Board recognizes them as limited to some adjustment of load related to some form of work, "work" and "load" are such broad terms that they too fail to limit the recited statistical analysis of events to a subset of all substantial practical applications. Therefore, claims 12-21 also attempt to preempt all substantial practical applications of the recited statistical analysis (again, improper under 35 U.S.C. § 101). It is noted that claims 3 and 27 are limited to events involving

employees; therefore, they are not deemed to improperly preempt all substantial practical applications of the statistical analysis.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no antecedent basis for “the computer-readable medium” in the preamble of claim 27. Since claim 27 makes reference to step (e), it will be assumed (for examination purposes) that "the computer-readable medium" should read as "the method" instead.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Susan S. Baum and Cheryl M. O'Donnell, *An Approach to Modeling Labor and Machine Down Time in Semiconductor Fabrication*, Proceedings Of The 23rd Conference On Winter Simulation, Phoenix, Arizona, ISBN:0-7803-0181-1, Pp. 448-54,1991 (Baum) *in view of* Jensen (U.S. Patent No. 6,065,000) and *further in view of* Alan Dix and Geoffrey Ellis, *Starting Simple - Adding Value to Static Visualisation Through Simple Interaction*, Proceedings Of The Working Conference On Advanced Visual Interfaces, L'Aquila, Italy, Pp. 124 - 34,1998 (Dix).

In the Board decision rendered June 13, 2007, the Board entered a new ground of rejection of claims 1-21 and 27 under 35 U.S.C. § 103(a) as obvious over Baum, Jensen, and Dix. This rejection is set forth in detail on pages 11-19 of the Board decision.

Applicant's amendment filed August 13, 2007 has amended all independent claims (claims 1, 7, 12, and 17) to specify that the date gap analysis includes "determining an elapsed time between <u>each of three or more</u> consecutive events and an average elapsed time." The new ground of rejection presented by the Board addressed "determining an elapsed time between consecutive events and an average elapsed time," which implies at least two events. The Board's rejection did not explicitly address "three or more consecutive events"; however, Fig. 6 of Baum shows a correlation among multiple numbers of occurrences and multiple machine uptimes. This suggests that a series of three or more consecutive events are monitored by Baum. Therefore,

the Examiner submits that a person of ordinary skill in the art at the time of Applicant's invention would have found it obvious to track three or more consecutive events because this serves to more effectively identify trends. Baum recognizes that pure averages of failure data can be misleading and, thus, it is not only important to identify a percentage of downtime, but also a distribution of uptime (Baum: page 452). Baum recognizes that gathering as much information as possible can yield a more accurate understanding of the events. Trending can provide alerts as to whether a situation is improving or deteriorating overall. One of ordinary skill in the art would have recognized this information as being useful to determine how to address negative events, especially in order to recognize a necessity for and extent of intervention.

The Board decision generally lays the groundwork for "a chart illustrating a value for each elapsed time according to a sequence in which the consecutive events occurred" on page 16, line 21 through page 17, line 4. Baum discloses a collection of data regarding time between consecutive events (as submitted by the Board on page 17, line 22 through page 18, line 2 of the Board decision); therefore, the Examiner further submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to further modify the Baum-Jensen-Dix combination to include "a chart illustrating a value for each elapsed time according to a sequence in which the consecutive events occurred" since "collection of data at a frequency sufficient to achieve the level of required output precision would have been understood and well within the ability of one of ordinary skill." (Page 17, line 25 through page 18, line 2 of the Board decision)

Regarding claims 4, 10, 15, and 19, while the Baum-Jensen-Dix combination does not expressly teach the specific details of the graph, these differences are only found in the non-functional descriptive material and are not functionally involved in the manipulative steps of the invention nor do they alter the recited structural elements; therefore, such differences do not effectively serve to patentably distinguish the claimed invention over the prior art. The manipulative steps of the invention would be performed the same regardless of the specific data. Further, the structural elements remain the same regardless of the specific data. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability as the claimed invention fails to present a new and unobvious functional relationship between the descriptive material and the substrate, *see In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994)); In re Ngai, 367 F.3d 1336, 1336, 70 USPQ2d 1862, 1863-64 (Fed. Cir. 2004); MPEP § 2106.* For example, the details of how the graph is displayed do not affect any decisions regarding workload adjustments within the scope of the claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-6733. The examiner can normally be reached on Monday-Friday, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on (571) 272-6702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susanna M. Diaz/
Primary Examiner, Art Unit 3692